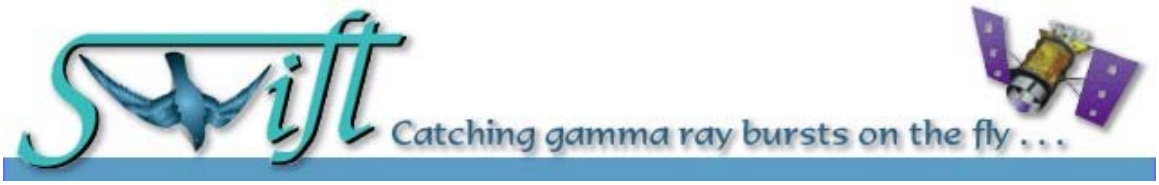

Swift Burst Alert Telescope (BAT) Cleaning Procedure for BAT Composite Tubes

410.4-PROC-0071

Revision -

Goddard Space Flight Center

Greenbelt, Maryland

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CHANGE RECORD PAGE (1 of 2)

DOCUMENT TITLE Requirements Document DOCUMENT DATE:			
ISSUE	DATE	PAGES AFFECTED	DESCRIPTION

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1.0 General

1.1 Introduction

BAT tube surfaces must be clean for proper adhesion of the end-fitting adhesive. The major contamination threat is mold release that may have been transferred from the cure mandrel to the internal surfaces of the tube. This procedure removes the mold release coating on the interior surface of the tube. A later procedure, 410.4-PROC-072, prepares the surface for bonding.

1.2 Applicable Documents

N/A

1.3 Applicable Drawings

2045229	Strut

1.4 Procedure Deviations

Deviations from this procedure shall be redlined in the official copy and will be initialed by the BAT Mechanical PDL and or designee and QA representative.

2.0 Requirements

2.1 Required Equipment

Item	Quantity
2045229, Struts	12

2.2 Required Personnel

Title	Name
Task Leader	Wes Alexander/547

3.0 Strut Cleaning Procedure

3.1 Precautions

Perform all operations in accordance with GSFC safety requirements. Review all MSDS sheets for the materials being processed. Dispose of hazardous materials properly, do not mix solvents together, and never place solvents into the general sewer system or in a solid waste receptacle. Wear approved solvent resistant gloves, such as polyethylene, when

performing solvent cleaning operations. Wearing of approved Nitrile or polyethylene gloves is required during detergent cleaning operations. Perform solvent wiping operations in a well-ventilated area. Thoroughly wash hands before and after handling solvents. It is recommended that the rinse from the detergent cleaning operations be caught in a large basin or in a sink. It is also recommended that a fixture be made to support the tubes during the solvent cleaning operations.

3.2 Procedure

Event #	Responsible Code	Event Description	Signature and Date		NCR #	Product Disposition Completion Date
			17. Performed by	18. Inspected by		
1	547	With a clean, soft nylon or polypropylene brush, wash the tube bore with a 5% by weight solution of Simple Green Clear detergent and de-ionized (DI) water heated to 100^0 F to 120^0 F. Lightly scrub the detergent into foam during the washing.				
2	547	Thoroughly rinse off detergent with DI water.				
3	547	In a clean, non-contaminating oven, dry the tube(s) for two (2) hours (minimum) at 150^0 to 175^0 F				
4	547	Wrap an extracted wipe around a clean metal pin attached to a long, clean dowel that is at least one-foot longer than the tube length. Attach the ends of the wipe to the pin with an approved tie-wrap or an approved lacing cord. Moisten the wipe in IPA (reagent grade or better). The diameter of the pin should be sized such that the moistened wipe will contact the tube's bore 360^0. Slowly push the wipe on the pin through the tube. Make sure that only the wipe makes contact with the tube bore. Discard wiper after one wipe. After wiping the tube's bore, wipe the tube's exterior surface with IPA-moistened wipes.				
5	547	Allow IPA to evaporate off all surfaces. This may take up to 30 minutes under room-temperature conditions.				
6	547	Further wipe surfaces with clean, pre-extracted wipers soaked in toluene in the same manner as step 4.				
7	547	Allow toluene to evaporate.				
8	547	Wipe surface with clean, pre-extracted wipers soaked in acetone as in step 4.				
9	547	Allow the acetone to dry.				

Event #	Responsible Code	Event Description	Signature and Date		NCR #	Product Disposition Completion Date
			17. Performed by	18. Inspected by		
10	547	Repeat step 4 but use IPA as the solvent.				
11	547	Allow the IPA to dry.				
12	547	Wrap tubes in a non-contaminating material, such as Llumalloy.				